

## CLAIMS

1  
2 1. A computer-based implementation of a method for determining one or more best  
3 matching resources, given a resource **x** and role **F**, in an matrix-based workflow model,  
4 said method comprising:

- 5 a) identifying an organizational unit where said resource **x** belongs;
- 6 b) identifying all super roles of said role **F**, if no super roles exist;
- 7 c) returning best matching resource as **x** if role **F** is a hierarchical role, else;
- 8 d) iteratively identifying a parent role from said list of super roles;
- 9 e) identifying a current role **R** from said iteratively identified parent role;
- 10 f) identifying in said organizational unit all resources, other than said resource **x**,  
11 that has said current role **R**, and if there is at least one identified resource, then  
12 returning said identified resource(s) as best matching resource, else;
- 13 g) identifying all servicing organizational units for said current role **R**, and  
14 h) repeating steps e-g, until all best matching resources are returned.

1 2. A computer-based implementation of a method for determining one or more best  
2 matching resources, given a resource **x** and role **F**, as per claim 1, wherein if no servicing  
3 organizational units are found in step g, said method further implementing the following steps:

- 4 i) escalating the list of super roles and identifying a new current role **R**;
- 5 j) repeating said steps e-h for said new current role **R** and returning best matching  
6 resources, and

7 k) identifying all parent organizational units (**OUPs**) of said organizational unit and  
8 repeating steps e-h with said **OUPs** as current organizational unit and returning best  
9 matching resources.

1 3. A computer-based implementation of a method for determining one or more best  
2 matching resources, given a resource **x** and role **F**, as per claim 2, wherein if in said step k, no  
3 resources are identified, said method further comprises the step of identifying all organizational  
4 units (**OUGs**) with **R** as a global role, and repeating steps e-h with said **OUGs** as current  
5 organizational unit, and returning best matching resources.

1 4 A computer-based implementation of a method for determining one or more best  
2 matching resources, given a resource **x** and role **F**, as per claim 1, wherein said matrix  
3 organizational model is a three-dimensional model comprising the following axes:  
4 organizational unit, title hierarchy, and functional roles.

1 5. A computer-based implementation of a method for determining one or more best  
2 matching resources, given a resource **x** and role **F**, as per claim 1, wherein said method is  
3 network enabled, said network comprising any of the following: local area network (**LAN**),  
4 wide area network (**WAN**), Internet, HTTP-based network, or PSTN/PBX network.

1 6. A system for automated network-enabled workflow management in a matrix  
2 organizational model, said organizational model comprising one or more organizational units,  
3 said system comprising:

- a) one or more databases storing information regarding design elements required for creating an application, definitions of organizational models, and workflow rules;
- b) a search engine interfacing with said one or more databases and utilizing said stored information to determine workflow routing in said matrix organizational model, and
- c) a router polling said one or more databases to retrieve workflow requests, and directing said workflow requests to appropriate recipient(s) based on said search engine determinations.

7. A system for automated network-enabled workflow management in a matrix organizational model, as per claim 6, wherein said search engine further comprises:

- a role extractor identifying all roles associated with said organizational models;
- a functional link extractor identifying all functional links associated with said organizational model;
- an inherited link extractor identifying all inherited links associated with said organizational model, and
- a matcher identifying appropriate recipient(s) by matching said workflow requests to said roles in organizational models while traversing a hierarchical tree of said organizational unit, and other organizational units based on said identified functional and inherited links.

8. A system for automated network-enabled workflow management in a matrix organizational model, as per claim 6, wherein said matrix organizational model is a three

3 dimensional model and said three dimensions comprise the following axes: organizational unit,  
4 title hierarchy, and functional roles.

1 9. A system for automated network-enabled workflow management in a matrix  
2 organizational model, as per claim 6, wherein information regarding said design elements in  
3 said organizational model are imported in any one of, or a combination of, the following ways:  
4 via a local database, via a remote database, imported from an address book or imported from  
5 another organizational model.

1 10. A system for automated network-enabled workflow management in a matrix  
2 organizational model, as per claim 6, wherein said network comprises any of the following:  
3 local area network (LAN), wide area network (WAN), Internet, HTTP-based networks, or  
4 PSTN/PBX network.

1 11. A system for automated network-enabled workflow management in a matrix  
2 organizational model, as per claim 6, wherein said search engine is a rules based search  
3 engine.

1 12. A system for automated network-enabled workflow management in a matrix  
2 organizational model, as per claim 6, wherein said one or more databases with definitions of  
3 organization models further comprises definitions of hierarchy, structure and function  
4 associated with organization models.

1 13. A system for automated network-enabled workflow management in a matrix  
2 organizational model, as per claim 6, wherein said system further comprises a statistical

analyzer providing a complete statistical analysis of workflow processing including means for tracking workflow cycles by date, event, requestor, or workflow actor.

14. A system for automated network-enabled workflow management in a matrix organizational model, as per claim 6, wherein said system further comprises an automated delegation system that allows users to delegate tasks for re-routing events for temporary process changes.

15. A system for automated network-enabled workflow management in a matrix organizational model, as per claim 6, wherein said router is a JAVA servlet.

16. A system for automated network-enabled workflow management in a matrix organizational model, as per claim 6, wherein said workflow rules are stored in a separate database.

17. A system for automated network-enabled workflow management in a matrix organizational model, as per claim 6, wherein said workflow management is externalized from applications created using said information in said one or more databases.

18. A system for automated network-enabled workflow management in a matrix organizational model, as per claim 6, wherein said definitions of organizational models further include definitions of functional links that extend said workflow process across organizations without defining hierarchical links.

1 19. A system for automated network-enabled workflow management in a matrix  
2 organizational model, as per claim 6, wherein said search engine follows as many links as  
3 needed to resolve said workflow requests by traversing a hierarchical tree of said  
4 organizational units in said organizational model, and identifying functional links to other  
5 organizations that service said organizational units.

1 20. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, said organizational model comprising  
3 one or more organizational units, said method comprising:

4 polling one or more databases for one or more work flow requests;

5 receiving said one or more workflow requests;

6 identifying appropriate recipient(s) in said matrix organizational model with regard to  
7 said one or more workflow requests, based on information stored in said one or more  
8 databases regarding design elements required for creating an application, definitions of  
9 organizational models, and workflow rules, and

10 forwarding said one or more requests to said identified appropriate recipient(s) in said  
11 matrix organizational model.

1 21. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, as per claim 20, wherein said step of  
3 identifying appropriate recipient(s) using said intelligent search engine further comprises:

4 identifying all roles associated with said organizational models;

5 identifying all functional links associated with said organizational model;  
6 identifying all inherited links associated with said organizational model, and  
7 identifying appropriate recipient(s) by matching said workflow requests to said roles in  
8 organizational models while traversing a hierarchical tree of said organizational unit  
9 and other organizational units based on said identified functional and inherited links.

1 22. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, as per claim 20, wherein said matrix  
3 organizational model is a three dimensional model comprising the following axes:  
4 organizational unit, title hierarchy, and functional roles.

1 23. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, as per claim 20, wherein information  
3 regarding said design elements in said organizational model are imported in any one of, or a  
4 combination of, the following ways: via a local database, via a remote database, imported from  
5 an address book or imported from another organizational model.

1 24. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, as per claim 20, wherein said network  
3 comprises any of the following: local area network (LAN), wide area network (WAN),  
4 Internet, HTTP-based networks, or PSTN/PBX network.

1 25. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, as per claim 20, wherein said search  
3 engine is a rules based search engine.

1 26. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, as per claim 20, wherein said method  
3 further performs a complete statistical analysis of workflow processing including means for  
4 tracking workflow cycles by date, event, requestor, or workflow actor.

1 27. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, as per claim 20, wherein said method  
3 further allows users to delegate tasks for re-routing events for temporary process changes.

1 28. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, as per claim 20, wherein said  
3 workflow rules are stored in a separate database.

1 29. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, as per claim 20, wherein said  
3 definitions of organizational models further include definitions of functional links that extend  
4 said workflow process across organizations without defining hierarchical links.

1 30. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, as per claim 20, wherein said search



3 engine follows as many links as needed to resolve said workflow requests by traversing a  
4 hierarchical tree of said organizational units in said organizational model, and identifying  
5 functional links to other organizations that service said organizational units.

1 31. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, said matrix organizational model  
3 comprising one or more organizational units, said method comprising:

4 polling one or more databases for one or more work flow requests;

5 receiving said one or more workflow requests;

6 identifying appropriate recipient(s) in said matrix organizational model with regard to  
7 said one or more workflow requests, based on information stored in said one or more  
8 databases regarding design elements required for creating an application, definitions of  
9 organizational models, and workflow rules;

10 said step of identifying appropriate recipient(s) further comprises identifying all roles,  
11 functional links, and inherited links associated with said organizational models, and  
12 identifying appropriate recipient(s) by matching said workflow requests to said roles in  
13 organizational models while traversing a hierarchical tree of said organizational unit  
14 and other organizational units based on said identified functional and inherited links,  
15 and

16 forwarding said one or more requests to said identified appropriate recipient(s) in said  
17 matrix organizational model, and

1 32. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, as per claim 31, wherein said matrix  
3 organizational model is a three dimensional model comprising the following axes:  
4 organizational unit, title hierarchy, and functional roles.

1 33. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, as per claim 31, wherein information  
3 regarding said design elements in said organizational model are imported in any one of, or a  
4 combination of, the following ways: via a local database, via a remote database, imported from  
5 an address book or imported from another organizational model.

1 34. A method for automated network-enabled workflow management in a matrix  
2 organizational model using an intelligent search engine, as per claim 31, wherein said  
3 workflow rules are stored in a separate database.